

REMARKS

Claims 1-76 were pending as of the action mailed on December 18, 2008. Claims 1, 19, 37, and 55 are in independent form. Claims 1, 2, 5-7, 18-20, 22-25, 36-38, 40-43, 54-56, 59-61, and 72 are being amended. No new matter has been added.

Reconsideration of the action is respectfully requested in light of the foregoing amendments and the following remarks.

Allowable Subject Matter

Applicants acknowledge that claims 28-29, 46-47, and 64-65 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Applicants reserve the right to rewrite claims 28-29, 46-47, and 64-65 to include all of the limitations of the base claim and any intervening claims to be in allowable form.

Section 101 Rejections

Claims 1-18 and 73 are rejected under 35 U.S.C. § 101 as allegedly not falling within one of the four statutory categories of invention. Applicants respectfully traverse the rejection.

In particular, the Office stated that “[t]he instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.” (Page 5 of Office Action dated December 18, 2008).

Applicants respectfully disagree. Nevertheless, in order to expedite prosecution, and without changing the scope of the claims, Applicants have amended claim 1 to recite “a method performed by at least one device of a communication system” and “transmitting packets at the third different data rate”. Applicants respectfully submit that claim 1, as amended, is tied to a statutory category that accomplishes the claimed method steps, and transforms underlying subject matter. Therefore, Applicants respectfully request withdrawal of the rejections to claim 1 and its dependent claims.

Section 102 Rejections

Claims 1-5, 16-23, 34-41, 52-59, and 70-72 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,483,676 ("Mahany"). Applicants respectfully traverse the rejection.

Claim 1 and its dependent claims

Applicants previously asserted that Mahany does not teach or suggest determining a packet loss indicator value. The Office responded by stating that:

... Mahany in col. 25 lines 44-50 recite data rate determination being based on the successful decoding whereby the occurrence of any bit errors in the decoding of the high data poll indicates the use of the low rate and as a fail-safe measure, excessive failures at accessing the base station through response to the multi-terminal poll, or errant message transmission attempts at the high data rate will result in the mobile terminals selecting the low data rate clearly suggest determining a packet loss indicator value for selecting the data rate as claimed. (Page 2 of Office Action dated December 18, 2008)

Applicants maintain the assertion that bit errors are not the same as packet loss indicators. Bit errors are correctable, such as with ECC coding at the local device, and packet loss is only correctable with re-transmission. Therefore, detecting the occurrence of any bit errors in the decoding is not the same as determining a packet loss indicator value, as recited by claim 1.

Furthermore, the portion of Mahany relied upon by the Office states that:

[T]he occurrence of any bit errors in the decoding of the high data poll indicates the use of the low data rate. (Col. 25, lines 48-50)
(emphasis added)

Mahany suggests that an occurrence of a single bit error indicates the use of a low data rate. Applicants respectfully submit that this portion of Mahany shows, even more clearly than before, that Mahany does not teach or suggest a packet loss indicator value.

The portion of Mahany relied upon by the Office continues, stating that:

As a fail-safe measure, excessive failures at accessing the base station through response to the multi-terminal poll, or errant

message transmission attempts at the high data rate will result in the mobile terminals selecting the low data rate, with periodic retries at the higher rate, e.g. based on the various criteria described with respect FIGS. 6 through 12. (Col. 25, lines 53-58)

Applicants respectfully assert that determining excessive failures at accessing the base station is not the same as determining a packet loss indicator value. Applicants respectfully submit that the Office has failed to identify any portion of Mahany that teaches or suggests a packet loss indicator. In fact, a discussion of Mahany's signal quality indicator describes using bit-level comparisons to detect errors. *See, e.g.*, col. 16, line 42 to col. 17, line 13. For example, Mahany states that:

A fifty-six bit image of the first eight bits of the pseudorandom test pattern is loaded into the comparison register At the end of the clock period, the shift register and compare registers are exclusive or-ed, and the number of errors determined. The next fifty-six bit image is then loaded into the comparison register and the next fifty-six samples are shifted in. This process continues for the duration of the test pattern.

A running total of the number of errors, including those noted in the synchronization process is maintained throughout the characterization process. At the conclusion of the process, the total number of errors is compared against a threshold value to make the data rate decision. The threshold for selecting e.g. 9600 baud operation is sixty errors out of two hundred eighty samples or twenty-one percent. If the error percentage is above this level, e.g. 4800 baud operation is used. (Col. 16, line 60 to col. 17, line 12)

The quoted portion of Mahany states that a number of errors is determined by comparing bits in a shift register and a compare register. The number of errors (i.e., bit errors) are compared to a threshold value to make a data rate decision. For at least similar reasons as discussed previously, counting a number of bit errors is not the same as determining a packet loss indicator value, as recited by claim 1. Applicants respectfully submit that claim 1 is allowable for at least these reasons.

In addition, Applicants previously asserted that Mahany does not teach or suggest selecting a third different data rate in response to the received signal quality value and the packet loss indicator value. In response, the Office stated that:

[C]ol. 2 lines 35-37 recite switching between two or more data rates, and by the provision of control means for adaptively selecting the best data rate dynamically according to changing operating conditions; further col. 7 line 41 to col. 8 line 14 specifically recite utilizing the third data rate indicating that the data rate selected can be a third different data rate as argued. (Pages 2-3 of Office Action dated December 18, 2008)

Applicants respectfully disagree.

Applicants maintain that Mahany discloses transmitting test patterns at higher data rates, and the relied upon portions of Mahany only disclose switching to the same higher data rates that are used to transmit the test patterns. *See, e.g.*, col. 2, line 65 to col. 3, line 5 (“a base station may insert a test pattern of substantially higher data rate into the polling process, such that upgraded transceiver units can determine the feasibility of use of such higher data rate”) (emphasis added); and col. 23, lines 18-25 (“A terminal having multiple data rate capabilities ... will monitor the higher data rate poll, and if such higher data rate poll is successfully received, the received signal will be evaluated ... so as to determine whether transmission should be attempted at the high data rate”) (emphasis added).

Mahany does not teach or suggest selecting a third different data rate in response to the signal quality value and the packet loss indicator value, as recited in claim 1. Claim 1 also recited that the received signal quality value is determined from received packets transmitted at a first data rate. In addition, claim 1 recited that the packet loss indicator value is determined from transmitted packets transmitted at a second data rate. Mahany discloses selecting a higher data rate by taking account of received signal characteristics at the same higher data rate.

Claim 1, as previously presented and currently amended, is allowable for at least this reason.

Nevertheless, as a clarification, and without changing the scope of the claim, Applicants have amended claim 1 to recite selecting a third different data rate in response to the signal quality value determined from the received packets transmitted at the first data rate and the packet loss indicator value determined from the transmitted packets transmitted at the second data rate.

The amendments adding language to claim 1 are being made for clarity, and do not change the scope of their corresponding claim elements. In fact, as stated previously, claim 1 recited that the received signal quality value is determined from the received packets transmitted at the first data rate (i.e., “determining a received signal quality value from received packets transmitted at a first data rate), and that the packet loss indicator value is determined from the transmitted packets transmitted at the second data rate (i.e., “determining a packet loss indicator value from transmitted packets transmitted at a second data rate”). As previously recited by claim 1, the third different data rate is selected “in response to the received signal quality value and the packet loss indicator value”, which are determined from packets transmitted at the first data rate and second data rate, respectively. The deletion of language from claim 1 clarifies the scope of the claim.

For at least similar reasons as discussed previously, Applicants respectfully submit that Mahany does not teach or suggest selecting a third different data rate in response to the signal quality value determined from the received packets transmitted at the first data rate and the packet loss indicator value determined from the transmitted packets transmitted at the second data rate. Again, Mahany discloses selecting a higher data rate by taking account of received signal characteristics at the same higher data rate.

Claim 1, as amended, is allowable for at least this additional reason.

Claims 2-5 and 16-18 depend from claim 1 and are allowable for at least similar reasons as set forth above with respect to claim 1, and in view of the additional recitations they contain.

For example, claim 5 is separately allowable for at least the following additional reasons. Applicants previously asserted that Mahany neither teaches or suggests generating a confidence value nor generating the confidence value for each of a plurality of available data rates. The Office responded, stating that:

[C]ol. 16 lines 4-9 recite the selection of data rate being based upon average value of signal strength, and col. 17 lines 5-13 recite selection of data rate being based on error percentage above a threshold level ... clearly anticipate generating the confidence value for each of a plurality available data rates because a confidence value is the range of values within which the true value is assured to lie. (Page 4 of Office Action dated December 18, 2008)

Applicants respectfully disagree.

Mahany states that:

A fixed threshold would be used for making data rate selection based upon signal strength. If the signal strength is above threshold, the high rate would be used. If signal strength is below threshold, the low rate would be used. (Col. 9, lines 10-15)

Mahany determines a signal strength of a data rate poll and selects a data rate.

Applicants respectfully assert that Mahany does not teach or suggest generating a confidence value for each of a plurality of available data rates.

As another example, claim 17 is separately allowable for at least the following additional reasons. Applicants previously asserted that Mahany does not teach or suggest a table indexed by available data rates and packet loss indicator values, as recited by claim 17. In response, the Office stated that:

[C]ol. 25 lines 59-67 recite the use of a stored table for adjusting the rate. (Page 4 of Office Action dated December 18, 2008)

A portion of Mahany relied upon by the Office states that:

Internal temperature information can be used in conjunction with a stored table containing typical oscillator frequency offsets as a function of temperature. (Col. 25, lines 59-60) (emphasis added)

Applicants maintain the assertion that “a stored table containing typical oscillator frequency offsets” is not “a table indexed by available data rates and packet loss indicator values”, as recited by claim 17.

Claim 19 and its dependent claims

Claim 19, as amended, is directed to an apparatus and includes a rate selector operative to select a third different data rate in response to the signal quality value determined from the packets received at the second data rate and the packet loss indicator value determined from the packets transmitted at the first data rate. For at least the same reasons set forth above with respect to claim 1, claim 19 is allowable over Mahany.

Claims 20-23, and 34-36 depend from claim 19 and are allowable for at least the same reasons set forth above with respect to claim 19, and in view of the additional recitations they contain.

For example, claim 22 is separately allowable for at least the following additional reasons. Claim 22 is directed to an apparatus and includes a table including a plurality of available data rates. For at least similar reasons as set forth above with respect to claim 17, claim 22 is allowable over Mahany.

As another example, Claim 23 is separately allowable for at least the following additional reasons. Claim 23 is directed to an apparatus and includes a rate selector further operative to generate a confidence value for each of a plurality of available data rates using the signal quality value and the packet loss indicator value. For at least the same reasons set forth above with respect to claim 5, claim 23 is allowable over Mahany.

As another example, claim 35 is separately allowable for at least the following additional reasons. Claim 35 is directed to an apparatus and includes a table indexed by available data rates and packet loss indicator values. For at least the same reasons set forth above with respect to claim 17, claim 35 is allowable over Mahany.

Claim 37 and its dependent claims

Claim 37, as amended, is directed to an apparatus and includes means for selecting a third different data rate in response to the signal quality value determined from the received packets received at the second data rate and the packet loss indicator value determined from the transmitted packets transmitted at the first data rate. For at least the same reasons set forth above with respect to claim 1, claim 37 is allowable over Mahany.

Claims 38-41 and 52-54 depend from claim 37 and are allowable for at least the same reasons set forth above with respect to claim 37, and in view of the additional recitations they contain.

For example, claim 40 is separately allowable for at least the following additional reasons. Claim 40 is directed to an apparatus and includes a table including a plurality of available data rates. For at least the similar reasons as set forth above with respect to claim 17, claim 40 is allowable over Mahany.

As another example, claim 41 is separately allowable for at least the following additional reasons. Claim 41, as amended, is directed to an apparatus and includes means for generating a confidence value for each of a plurality of available data rates using the signal quality value and the packet loss indicator value. For at least the same reasons set forth above with respect to claim 5, claim 41 is allowable over Mahany.

As another example, claim 53 is separately allowable for at least the following additional reasons. Claim 53 is directed to an apparatus and includes a table indexed by available data rates and packet loss indicator values. For at least the same reasons set forth above with respect to claim 17, claim 53 is allowable over Mahany.

Claim 55 and its dependent claims

Claim 55, as amended, is directed to a computer-readable medium and includes selecting a third different data rate in response to the signal quality value determined from the received packets transmitted at the first data rate and the packet loss indicator value determined from the transmitted packets transmitted at the second data rate. For at least the same reasons set forth above with respect to claim 1, claim 55 is allowable over Mahany.

Claims 56-59 and 70-72 depend from claim 55 and are allowable for at least the same reasons set forth above with respect to claim 55, and in view of the additional recitations they contain.

For example, claim 59 is separately allowable for at least the following additional reasons. Claim 59, as amended, is directed to a computer-readable medium and includes generating a confidence value for each of a plurality of available data rates using the signal quality value and the packet loss indicator value. For at least the same reasons set forth above with respect to claim 5, claim 59 is allowable over Mahany.

As another example, claim 71 is separately allowable for at least the following additional reasons. Claim 71 is directed to a computer-readable medium and includes a table indexed by available data rates and packet loss indicator values. For at least the same reasons set forth above with respect to claim 17, claim 71 is allowable over Mahany.

Section 103 Rejections

Claims 6-9, 12-15, 24-27, 30-33, 42-45, 48-51, 60-63, 66-69, and 73-76 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mahany in view of US Patent No. 7,075,913 ("Yavuz"). Applicants respectfully traverse the rejection.

The Office stated that:

In response to applicant's arguments in pages 21-24 against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642, F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). (Page 4 of Office Action dated December 18, 2009)

Applicants respectfully disagree with the Office's assertion that Applicants "attacked references individually."

Applicants respectfully submit that the Office did not assert that Yavuz teaches or suggests the features of claim 1, 19, 37, or 55. Therefore, Applicants resubmit that claims 6-9, 12-15, and 73; 24-27, 30-33, and 74; and 42-45, 48-51, and 75; and 60-63, 66-69, and 76 depend from claims 1, 19, 37, and 55, respectively, and are allowable for at least the same reasons set forth above with their respective claims.

In fact, Applicants previously asserted and continue to maintain that Yavuz does not teach or suggests the features of claims 1, 19, 37, and 55, as previously recited, or as currently amended. For example, Yavuz does not teach or suggest selecting a data rate, let alone selecting a third different data rate in response to a signal quality value determined from the received packets transmitted at the first data rate and the packet loss indicator value determined from the transmitted packets transmitted at the second data rate. Yavuz discloses using a higher data rate and retransmitting the data a fixed number of times. (Pages, 18-19 of Reply to Action filed on November 1, 2007).

Therefore, Applicants maintain that claims 6-9, 12-15, and 73 are allowable for at least the same reasons set forth above with respect to claim 1, and in view of the additional recitations they contain.

For example, claim 6 is separately allowable for at least the following additional reasons. Claim 6, as amended, recites generating an adjustment value for the signal quality value from the packet loss indicator value. The Office previously acknowledged that Mahany does not disclose this subject matter and does not now reject claim 6 as anticipated by Mahany. Yavuz does not cure this deficiency. Yavuz only discloses a data rate multiplier that is greater than 1. (Abstract). Yavuz does not teach or suggest generating a separate adjustment value from a packet loss indicator value.

As another example, claims 6-9 and 12-13 are separately allowable for at least the following additional reasons. Claims 6-9 and 12-13 depend from claim 5. The Office does not now assert that Yavuz discloses claim 5. Notwithstanding, as similarly argued in Applicants' response filed on November 1, 2007, Yavuz neither teaches or suggests generating confidence values using a signal quality value and a packet loss indicator value, nor generating a confidence value for each of a plurality of available data rates. Yavuz only discloses that the data rate multiplier is greater than 1, and a single data rate multiplier used to calculate a single serviced data rate. (Pages, 19-20 of Reply to Action filed on November 1, 2007). Therefore, claims 6-9 and 12-13 are allowable for at least the same reasons set forth above with respect to claim 5.

Claims 24-27, 30-33, and 74 depend from claim 19. Claim 19, as amended, is directed to an apparatus and includes a transmit section operative to transmit packets at a first data rate and to determine a packet loss indicator value, and a rate selector operative to select a third different data rate in response to the signal quality value determined from the packets received at the second data rate and the packet loss indicator value determined from the packets transmitted at the first data rate. For at least the same reasons set forth above with respect to claims 6-9, 12-15, and 73 (that depend from claim 1), claims 24-27, 30-33, and 74 (that depend from claim 19) are allowable over a combination of Mahany and Yavuz, and in view of the additional recitations they contain.

For example, claims 24-27 and 30-33 are separately allowable for at least the following additional reasons. Claims 24-27 and 30-33 depend from claim 23. Claim 23 is directed to an apparatus where the rate selector is further operative to generate a confidence value for each of a plurality of available data rates using the signal quality value and the packet loss indicator value.

For at least the same reasons set forth above with respect to claim 5, claims 24-27 and 30-33 (that depend from claim 23) are allowable over a combination of Mahany and Yavuz.

As another example, claims 30-31 are separately allowable for at least the following additional reasons. Claims 30-31 depend from claim 24. Claim 24 is directed to an apparatus and includes a retry processor operative to generate an adjustment value for the signal quality value from the packet loss indicator value. For at least the same reasons set forth above with respect to claim 6, claims 30-31 (that depend from claim 24) are allowable over a combination of Mahany and Yavuz.

Claims 42-45, 48-51, and 75 depend from claim 37. Claim 37, as amended, is directed to an apparatus and includes means for transmitting packets at a first data rate, and means for determining a packet loss indicator value from the transmitted packets; and means for selecting a third different data rate in response to the signal quality value determined from the received packets received at the second data rate and the packet loss indicator value determined from the transmitted packets transmitted at the first data rate. For at least the same reasons set forth above with respect to claims 6-9, 12-15, and 73 (that depend from claim 1), claims 42-45, 48-51, and 75 (that depend from claim 37) are allowable over a combination of Mahany and Yavuz, and in view of the additional recitations they contain.

For example, claims 42-45 and 48-49 are separately allowable for at least the following additional reasons. Claims 42-45 and 48-49 depend from claim 41. Claim 41, as amended, is directed to an apparatus that includes means for generating a confidence value for each of a plurality of available data rates using the signal quality value and the packet loss indicator value. For at least the same reasons set forth above with respect to claim 5, claims 42-45 and 48-49 (that depend from claim 41) are allowable over a combination of Mahany and Yavuz.

As another example, claims 48-49 are separately allowable for at least the following additional reasons. Claims 48-49 depend from claim 42. Claim 42, as amended, is directed to an apparatus and includes means for generating an adjustment value for the signal quality value from the packet loss indicator value. For at least the same reasons set forth above with respect to claim 6, claims 48-49 (that depend from claim 42) are allowable over a combination of Mahany and Yavuz.

Claims 60-63, 66-69, and 76 depend from claim 55. Claim 55, as amended, is directed to a computer-readable medium and includes determining a packet loss indicator value from transmitted packets transmitted at a second data rate; and selecting a third different data rate in response to the signal quality value determined from the received packets transmitted at the first data rate and the packet loss indicator value determined from the transmitted packets transmitted at the second data rate. For at least the same reasons set forth above with respect to claims 6-9, 12-15, and 73 (that depend from claim 1), claims 60-63, 66-69, and 76 (that depend from claim 55) are allowable over a combination of Mahany and Yavuz, , and in view of the additional recitations they contain.

For example, claims 60-63 and 66-67 are separately allowable for at least the following additional reasons. Claims 60-63 and 66-67 depend from claim 59. Claim 59, as amended, is directed to a computer-readable medium and includes generating a confidence value for each of a plurality of available data rates using the signal quality value and the packet loss indicator value. For at least the same reasons set forth above with respect to claim 5, claims 60-63 and 66-67 (that depend from claim 59) are allowable over a combination of Mahany and Yavuz.

As another example, claims 66-67 are separately allowable for at least the following additional reasons. Claims 66-67 depend from claim 60. Claim 60, as amended, is directed to a computer-readable medium and includes generating an adjustment value for the signal quality value from the packet loss indicator value. For at least the same reasons set forth above with respect to claim 6, claims 66-67 (that depend from claim 60) are allowable over a combination of Mahany and Yavuz.

Conclusion

By responding in the foregoing remarks only to particular positions taken by the Office, Applicants do not acquiesce with other positions that have not been explicitly addressed. In addition, Applicants' arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

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Applicants respectfully request that all pending claims be allowed. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

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